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Type II Progress Report for Period 1 December 1975 to 29 February 1976

Prepared for: National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

A. Problems

- (1) The Eel River Basin Comprehensive Study and Humboldt Harbor and Bay, to which this study was to have been applied, was not funded as expected. For this reason, other on-going local projects are being substituted. Humboldt Bay is being analyzed from the oceanographic and overall environmental standpoint as part of the Eureka--Arcata Regional Sewage Facility Project. We are in the process of applying the general techniques utilized in the north San Francisco Bay to Humboldt Bay. This includes: relating river runoff and sediment discharges statistics to the LANDSAT imagery, plotting dynamic surface patterns within the bay and determine the seasonal runoff patterns. This information will be compiled and applied to the problem of selecting a sewage outfall site.
- (2) San Pablo Bay Correlation Project - Comparisons of LANDSAT density and available sediment concentration statistics has not resulted in the overall seasonal correlation hoped for. During extremely heavy Sacramento River discharge periods anomalous coefficients resulted. Although some of the shallow water data showed good correlation, the overall bay statistics did not. The lack of funds for simultaneous sediment sample collection was one of the causes of this problem.

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N76-19513

(E76-10205) CALIFORNIA COAST NEARSHORE
PROCESSES STUDY USING ERTS-B DATA Progress
Report, 1 Dec. 1975 - 29 Feb. 1976 (Army
Engineer District, San Francisco, Calif.)
CSCI 08J G3/43 00205
2 p HC \$3.50

B. Accomplishments

(1) Review of study progress with Ed Crump, NASA Technical Representative.

(2) Channel Island Harbor Data Collection Study.

In conjunction with this Channel Island study a flight test and sea truth collection was made simultaneous with the LANDSAT overpass on February 18, 1976. The collected information is being supplemented by project LEO (Littoral Environmental Observations) and U. S. Army Corps of Engineers CERC (Coastal Engineering Research Center) data collected at Port Hueneme. The primary emphasis of this phase of this study is the analysis of the sediment budget problems in the Ventura Harbor, Channel Island Harbor and Port Hueneme. These problems have to do specifically with the inter-relationship of the nearshore processes and the shore protection structures. The LANDSAT imagery can be interpreted for nearshore current and sediment transport patterns. This information is being used as background in analysis of the harbor fill problem at Ventura Harbor and the continuous dredging at the mouth of Channel Island Harbor. The aircraft flights and sea truth survey provided information on several current shears or reversals in the Anacapa Channel. The imagery for February 18, 1976 has not yet arrived, but the type of feature found in the Anacapa Channel appears to be significant to the harbor sediment budgets. On the previous surveys the shears in the channel indicated the presence of large complex gyres. This dynamic system is the cause of the influx of material into harbors.

(3) The mosaics of the California current periods are assembled. Plots of the currents during the Oceanic, Upwelling, and Davidson periods have been made. Comparison to previous plots is being prepared.

C. Significant Results - None

D. Publications - None

E. Recommended Changes - None

F. Funds Expended - \$39,500

G. Data Use Tabulation

Value of data allowed	\$ 9,800
Value of data ordered	\$ <u>Standing order</u>
Value of data received	\$ <u>4,040</u>

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